Sierra Nevada Conservancy Grant Program
Safe Drinking Water, Water Quality and Supply, Flood Control,
River and Coastal Protection Act of 2006 (Proposition 84)

Subregion: **CENTRAL** **County: NEVADA**

Applicant: **NEVADA IRRIGATION DISTRICT**

Project Title: **ENVIRONMENTAL REVIEW: ASSESSING THE IMPACTS OF REMOVING MERCURY-LADEN SEDIMENT FROM COMBIE RESERVOIR**

Reference Number: SNC 070150

PROJECT SCOPE

Conduct an environmental review under the California Environmental Quality Act to remove mercury-laden sediment from Combie Reservoir by use of innovative technology and to restore riparian habitat in the upper Bear River watershed. The environmental analysis is a critical step in determining the feasibility of removing large quantities of sediment with mercury from a reservoir such as Combie. Because this is a recurring problem throughout the Sierra Nevada, this work will help to inform irrigation districts about removal of contaminants from water sources.

Specific actions include:

- Conduct meetings with permitting agencies;
- Consult on initial study and environmental review;
- Prepare CEQA documents;
- Obtain necessary permits from local, state and federal agencies.

PROJECT SCHEDULE

DETAILED PROJECT DELIVERABLES	TIMELINE
NHI report on flow augmentation, increased storage and potential impact to reservoir; strategies for establishing flow regime	October 2008
Habitat maps, water sediment and biota sampling	December 2008
SWS Report on findings	December 2008
Complete fish inventory and CEQA analysis	July 2009
Obtain permits from CDFG, USGS, DWR & Corp. of Engineers	December 2009
Final Report/Final Payment Request	**May 2010**

PROJECT COSTS

PROJECT BUDGET CATEGORIES	TOTAL SNC FUNDING
Meetings with consultants and permitting agencies	$15,000
Initial study and environmental review	$10,000
Preparation of CEQA documents	$60,000
Permits	$15,000
GRAND TOTAL	**$100,000**

Letters of Support:

- None

Recommendation:

Staff recommendation is to fund this project at the requested level of $100,000.

ENVIRONMENTAL REVIEW: ASSESSING THE IMPACTS OF REMOVING MERCURY-LADEN SEDIMENT FROM COMBIE RESERVOIR

Project Summary

The Bear River is one of the most impacted watersheds in the Sierra Nevada foothill region by mercury and methylmercury contamination from historic mining practices. The U.S. Geological Survey (USGS) has been leading a multi-agency effort (Alpers et al., 2005b) in the upper Bear River watershed to identify total mercury and methylmercury "hotspots" and have concurred that multitudinous abandoned mine sites are likely sources of contamination within the watershed, as well as legacy contamination in streambed sediments that are potentially being transported during storm events. Available data collected in the upper Bear River watershed indicate that methylmercury concentrations in water and aquatic biota increase dramatically and systematically in stream reaches within 10 kilometers downstream of two major reservoirs on the river. These reservoirs include Rollins Reservoir, upstream of Combie Reservoir, and Camp Far West Reservoir, downstream of Combie Reservoir. All three reservoirs are listed as impaired by mercury on California's 303(d) list under the Clean Water Act.

The project, titled *Environmental Review: Assessing the Impacts of Removing Mercury-Laden Sediment from Combie Reservoir* and hereafter referred to as *The Combie Reseroir Project),* will conduct an environmental review on the use of an innovative technology, developed by Knelson Gravity Solutions of Canada, to remove mercury-laden sediment from Sierra Nevada waterbodies. Combie Reservoir will serve as the demonstration site and is part of a larger, more comprehensive plan of action that has been written into the Consumnes, American, Bear and Yuba River Integrated Regional Watershed Management Plan (CABY IRWMP). The environmental review conducted under funding provided by the Sierra Nevada Conservancy will serve as a model for other mercury extraction projects that are projected to occur in the CABY region.

The Nevada Irrigation District is requesting $100,000 from the SNC for this project. An additional $60,000 will be provided by the District. The source of the funds include a cash match and in-kind technical expertise from NID staff, which is in and over the $60,000. Funding is available in December 2007.